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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,647	12/19/2001	Thomas J. Pinnavaia	MSU 4.1-568	9416
7590 04/16/2004			EXAMINER	
McLeod & Moyne, P.C. 2190 Commons Parkway Okemos, MI 48864			SAMPLE, DAVID R	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b> 10/025,647	<b>Applicant(s)</b> PINNAVAIA ET AL.	
	<b>Examiner</b> David Sample	<b>Art Unit</b> 1755	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) 13-19, 30-42, 53-55, 57-63, 65-71, 77, 78 and 81 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 6-10, 12, 20-22, 24-29, 43-46, 49-52, 56, 64, 72-75, 79, 80, 82 and 83 is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 11, 23, 47, 48 and 76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 102*

Claims 1, 3-5, 11, 23 47, 48 and 76 are rejected under 35 U.S.C. 102(b) as being anticipated by Liu et al. (in *J. Am. Chem. Soc.*, vol. 122, pages 8791-8792, published 08/24/2000).

Liu et al. discloses a mesoporous aluminosilicate material having the claimed properties. See page 8791, second column first full paragraph Table 1, page 8792.

The present application is a CIP of application serial no. 09/792,017. The present application is entitled to the priority of the '017 application if the present claims have adequate written description support in the '017 application. Instant claims 1, 3-5, 11, 23, 47, 48, 76 are not supported by the '017 application because the '017 application fails to disclose the concept that the aluminosilicate may not have an x-ray diffraction peak between 2 and 100 nm. Therefore, claims 1, 3-5, 11, 23 47, 48, 76 of the instant application are not entitled to the priority of the '017 application and the reference qualifies as prior art under 35 U.S.C. § 102(b).

Claims 1, 3, 5, 23, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Shu et al. (US Patent No. 5,232,675).

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Shu et al. discloses a zeolite aluminosilicate composition which retains 85.1% of its crystallinity after steaming for 4 hours in 100% steam at 800°C. See Table 4, lines 12-17. In zeolites, the crystalline framework encompasses micropores. If the crystallinity decreases from 100 to 85.1% (as the zeolite does in Example 15), then the micropores of the zeolite must inherently decrease a corresponding amount. Accordingly, the claimed steam stability is assumed to be inherent to the material of Shu et al. See MPEP 2112.

It is noted that Shu employs an atmosphere of 100% steam whereas the present claims refer to a treatment in 20% steam. However, an increased steam content would result in a greater decrease in porosity. Thus, steaming at 100% steam would result in a larger decrease in porosity than steaming at 20% steam. Since the material of Shu et al. exhibits the claimed decrease in porosity at 100% steam, it is assumed that it would inherently possess the same or better steam stability at the claimed atmosphere of 20%.

The zeolite in Example 15 was prepared from the zeolite of Example 11, which was formed from zeolite made in Example 4. See col. 7, line 68, col. 9, lines 20-25 and col. 15, line 63. The zeolite of Example 4 has a  $\text{SiO}_2/\text{Al}_2\text{O}_3$  ratio of 39.3 (i.e., a Si/Al ratio of 19.65).

Zeolites inherently possess  $\text{AlO}_4$  and  $\text{SiO}_4$  linked tetrahedrons.

The reference fails to disclose that the materials are "assembled from zeolite fragments." However, this recitation is a process recitation in a product claim because the recitation limits the starting materials, not the resulting product. Process limitations in product claims do not limit the claims to the recited steps, only the structure implied by the steps. See MPEP 2113. It is unclear what "structure" the cited recitation implies. Accordingly, no difference can be discerned between the product of the reference and the product of the present claims.

***Response to Arguments***

Applicant's arguments filed January 22, 2004 have been fully considered but they are not persuasive.

Rejection over Liu et al.

Applicants assert that the Example in Liu et al. is reproduced in the parent applications and in the present application, and therefore, the reference is not prior art. Applicants appear to be attempting to "swear behind" Liu et al. by showing that applicants had possession of at least what is disclosed in the reference. See, e.g., MPEP § 715.02. However, Liu et al. qualifies as prior art under 35 U.S.C. § 102(b), and a 102(b) reference cannot be "sworn" behind because the reference is a statutory bar. See MPEP § 715.

As described above, the present application is not entitled to priority to the parent application. Therefore, the effective filing date of the present application is December 19, 2001 and the Liu et al. reference is a 102(b), statutory bar reference.

Rejection over Shu et al. (US 5,232,675)

Applicants assert that Shu et al. relates to zeolite materials whereas the present invention relates to materials having an x-ray diffraction in the mesopore range whereas Shu et al. exhibits x-ray diffraction peaks in the angstrom range. This argument is not deemed persuasive. There is nothing in the presently rejected claims that limits the x-ray diffraction pattern of the material.

Applicants further state that the reference fails to disclose assembling the material from "zeolite fragments." As noted above, the cited limitation is process limitation, and does not render the present claims patentable unless the recitation implies a structure to the product that is

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different than the prior art. In the present instance, the examiner can discern no structure implied by the recitation of "assembled from zeolite fragments." Therefore, the examiner can discern no difference between the reference and the present claims since the claimed properties are either disclosed or inherent in the reference.

#### ***Allowable Subject Matter***

Claims 2, 6-10, 12, 20-22, 24-29, 43-46, 49-52, 56, 64, 72-75, 79, 80, 82, and 83 are allowed.

#### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (572)272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Sample  
Primary Examiner  
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